

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (currently amended) A scrubber for the cleaning of gases, comprising:

a scrubber tower;

a plurality of scrubber stages, each arranged in the scrubber tower with different ones of the plurality of scrubber stages at different levels above each other in the scrubber tower, at least one of the plurality of scrubber stages above a lowest one of said plurality of scrubber stages comprises a ring-shaped fluid storage tank arranged inside the scrubber tower and is arranged surrounding a central channel through which ~~the~~ gas that is to be cleaned can pass upwards, each ring-shaped tank forming a localized constriction in portions of the central channel passing through the scrubber stages, such that lengthwise portions of the central channel inside the ring-shaped tanks each have smaller areas in cross-section than lengthwise portions of the central channel outside the ring-shaped tanks;

a separation trough at the bottom of each of the plurality of stages of the scrubber above the lowest one of the plurality of scrubber stages and arranged separating the fluid from ~~the~~ an upwards flowing flow of gas, the separation trough

having obliquely placed laminae leading the fluid that arrives from one of the plurality of scrubber stages disposed above the separation trough to trough channels arranged under the laminae that lead the fluid onwards to the corresponding ring-shaped fluid storage tank;

a pump tank at each of the plurality of scrubber stages above the lowest one of the plurality of scrubber stages and arranged at an outer surface of the scrubber tower, the pump tank being connected directly to the corresponding ring-shaped fluid storage tank through a connection in the outer surface of the scrubber tower; and

a circulation pump connected to the corresponding pump tank at a level of each of the plurality of scrubber stages and arranged to feed, through a feed pipe present in the corresponding pump tank, fluid from the corresponding ring-shaped fluid storage tank at the bottom of the scrubber stage to spray beams arranged at the upper part of the scrubber stage for distribution over the cross-section of the scrubber in a direction against the ~~up-wards~~ upwards gas flow,

wherein the separation trough is recessed within and surrounded by the ring-shaped fluid storage tank, and a length of the feed pipe is limited to a height of the scrubber stage.

2. (Previously Presented) The scrubber according to claim 1, wherein each of the plurality of scrubber stages above

the lowest of the plurality of scrubber stages comprises the ring-shaped fluid storage tank located inside of the scrubber tower.

3-9. (Canceled)

10. (previously presented) The scrubber according to claim 1, wherein the feed pipe feeding the fluid to the spray beams is located inside the outer surface of the scrubber tower.

11-15. (Canceled)

16. (currently amended) A scrubber for the cleaning of gases, comprising:

a scrubber tower;

a plurality of scrubber stages, each arranged in the scrubber tower with different ones of the plurality of scrubber stages inside the scrubbing tower ~~at different levels above each other~~ arranged in succession along a length in from a bottom of the scrubber tower to a top of the scrubbing tower, at least one of the plurality of scrubber stages above a lowest one of said plurality of scrubber stages comprises a ring-shaped fluid storage tank arranged inside the scrubber tower and is arranged surrounding a central channel through which ~~the~~ an upwards flowing gas that is to be cleaned can pass ~~upwards~~, each ring-

shaped tank forming a localized constriction in a portion of the central channel passing through the respective scrubber stage, such that lengthwise portions of the central channel located inside the ring-shaped tanks each have smaller areas in cross-section than lengthwise portions of the central channel outside the ring-shaped tanks;

a separation trough at the bottom of each of the plurality of stages of the scrubber above the lowest one of the plurality of scrubber stages and arranged separating the fluid from the upwards flowing gas, the separation trough having obliquely placed laminae leading the fluid that arrives from one of the plurality of scrubber stages disposed above the separation trough to trough channels arranged under the laminae that lead the fluid onwards to the corresponding ring-shaped fluid storage tank;

a pump tank at each of the plurality of scrubber stages above the lowest one of the plurality of scrubber stages and arranged along the scrubber tower, the pump tank being connected directly to the corresponding ring-shaped fluid storage tank; and

a circulation pump connected to the corresponding pump tank at a level of each of the plurality of scrubber stages and arranged to feed, through a feed pipe present in the corresponding pump tank, fluid from the corresponding ring-shaped fluid storage tank at the bottom of the scrubber stage to spray beams arranged at the upper part of the scrubber stage for

distribution over the cross-section of the scrubber in a direction against the ~~up wards gas flow~~ upwards flowing gas, wherein the separation trough is recessed within and surrounded by the ring-shaped fluid storage tank, and a length of the feed pipe is limited to a height of the scrubber stage.

17. (new) A scrubber for the cleaning of gases, comprising:

a scrubber tower having a central channel extending therethrough, through which operatively passes, in an upward flow, a gas that is to be cleaned,

a plurality of scrubber stages located in the scrubber tower, each of the scrubber stages arranged at different levels above each other in the scrubbing tower,

each of the scrubber stages that are above a lowest scrubber stage comprising a ring-shaped fluid storage tank arranged inside the scrubber tower and surrounding the central channel, each ring-shaped tank located at a bottom of the respective scrubber stage and forming a localized constriction in the central channel passing through the respective scrubber stage, such that lengthwise portions of the central channel located inside the ring-shaped tanks have smaller cross-sections than lengthwise portions of the central channel located outside the ring-shaped tanks,

each of the scrubber stages above the lowest scrubber stage further comprising a circulation pump configured to feed, through feed pipes, fluid from the ring-shaped tank at the bottom of the respective scrubber stage to spray beams arranged at an upper part of the respective scrubber stage to distributed the fluid over a cross-section of the scrubber in a direction opposed to the upward flow of the gas, and

each of the scrubber stages above the lowest scrubber stage yet further comprising a separation trough configured to operatively separate the fluid from the gas as the gas flows upward through the central channel, each separation trough comprising obliquely placed laminae leading fluid that arrives from scrubber stages disposed above the separation trough to trough channels arranged under the laminae and to trough channels leading to the ring-shaped tank of the respective scrubber stage.

18. (new) The scrubber according to claim 17, wherein each circulation pump is connected to a respective ring-shaped tank and located at essentially a same level as the respective ring-shaped tank.

19. (new) The scrubber according to claim 18, wherein the circulation pump is arranged outside of a respective ring-shaped tank and outside of the scrubber tower, and connected

by means of an inlet pipe to a connection on the respective ring-shaped tank.

20. (new) The scrubber according to claim 18, wherein a pump tank is arranged outside of each ring-shaped tank and outside of the scrubber tower, directly connected to the ring-shaped tank through a connection, and each circulation pump is arranged in or connected to a respective pump tank.

21. (new) The scrubber according to claim 17, wherein each circulation pump is arranged on the ground outside of each respective ring-shaped tank and outside of the scrubber tower, and connected by means of an inlet pipe to a connector on the respective ring-shaped tank.

22. (new) The scrubber according to claim 17, wherein each feed pipe is located inside an outer surface of the scrubber tower.

23. (new) The scrubber according to claim 17, wherein each ring-shaped tank surrounds a respective separation trough, each separation trough extending across a constricted cross-section of the central channel.

24. (new) The scrubber according to claim 16, wherein each separation trough is surrounded by a respective ring-shaped tank.

25. (new) The scrubber according to claim 24, wherein an outer periphery of each separation trough is located along an internal periphery of the respective ring-shaped tank.

26. (new) The scrubber according to claim 24, wherein each separation trough at a downstream end of the respective ring-shaped tank with respect to a flow of the upwards flowing gas.